

# Universal relativistically invariant approach to construction of self-similarity solutions for nuclear collisions in a wide energy range

**Baldina E G**<sup>1,2</sup>

<sup>1</sup> Joint Institute for Nuclear Research, Zholio-Kyuri 6, Dubna, Moscow Region 141980, Russia

<sup>2</sup> Institute for Advanced Studies “Omega”, Lesnaya 3 Office 1, Dubna, Moscow Region 141986, Russia

e.baldina@mail.ru

The report addresses a universal relativistically invariant approach to construction of self-similarity solutions for description of nuclear collisions from hundreds MeV/nucleon to highest achieved energies of hundreds GeV/nucleon. Specific features of description of cumulative reactions with high transverse momenta are considered based on experimental data obtained with nuclear beams of the UNK accelerator complex (IHEP, Protvino). The specific features of collective effects and A-dependences in reaction cross sections are discussed, as applied to the available experimental data at high energies and planned experiments at the NICA accelerator complex (JINR, Dubna).